

Remarks of
NASA Administrator
Daniel S. Goldin
Commencement Address
University of Arizona
May 16, 1998

President Likens, Administration and Faculty, distinguished guests, friends and loving families, and most of all, graduating students:

I am deeply honored by the degree you have bestowed upon me and for the privilege of addressing you today.

I've done my homework.

I know about the beach ball and tortilla tradition -- now, I've seen it firsthand.

I know about Barry Goldwater's 3 minute -- and very well received -- speech.

And I know a lot of people would love to hear Greg Kinnear.

Well, I never ran for President. And I have never been nominated for an Academy Award.

But I am a rocket scientist.

I'm smart enough to know that I am at one of the finest schools in the country . . . addressing the best students in the world.

Just in case, I'll be on the lookout for UFOs. Unidentified Flying -- or Flour -- Objects.

Today, I would like the graduates of the University of Arizona to remember a phrase that you hear around NASA.

Although the degrees you will receive are great achievements, it's not "Mission Accomplished."

The phrase I'm thinking of is: "Go for Launch."

The classes, the courses, the cramming.

Hanging out on the Mall, cheering on the Wildcats, and growing up at "Dirt Bags."

Well, all of those experiences have prepared you for where you are today.

Sitting proudly on a launch pad . . . ready for what will be -- I assure you -- an unbelievable journey.

I'm not here to tell you what you are going to see on your trip. It's like one of our NASA missions.

Everybody experiences something different.

And to be honest, we don't know exactly what is out there. That's why we go.

We want to find out.

What ignites the human spirit -- the thrust behind it -- is overcoming the unexpected and discovering the unknown.

That's what life is about.

So I can't tell you what's out there in the "real world."

But I can give you some observations and advice . . . starting with an observation from my graduation.

I took my last final on a Friday afternoon in New York City.

Before I knew it, it was Sunday and I was at the airport departing for my first job. I was going to work at NASA . . . in Cleveland, Ohio.

70 members of my family showed up at the airport.

They wanted to know: "Why in the world is this kid from the Bronx going way out West . . . to Cleveland, Ohio?"

I told them: "I am going out West to take America to the moon, to Mars and on to the stars."

They didn't understand, but I knew.

There was an image burned into my brain. I saw it clearly.

And ever since my father started taking me to the Hayden Planetarium, I knew I was going to help America open the space frontier for America.

I had a dream. And I was also a nerd.

But thirty years later, I stood in the Oval Office with my hand on a family bible, and I was sworn in as the 9th NASA Administrator.

I'm a child of 1st generation Americans. And as I stood there -- with the President and my parents -- I thought:

What an incredible country we live in.

This is the only place in the world that could happen. So never take for granted the freedom or the opportunity we have in this country.

Especially now.

Because there is more opportunity today than ever before.

And that opportunity awaits each and every one of you who wants to reach for the stars.

But to make your mark, have a meaningful philosophy of life first.

Don't just search for money. Have a dream and follow it. Set tough goals. Take risks.

And when you have failure, treat it as blessing, not as a problem. Learn from it. And never stop.

Because in the 21st century, your generation is going to lead the world . . . and hopefully, even **leave** this world.

That might be living on the International Space Station, or maybe working on a research station on a near-Earth asteroid.

That might be developing a colony on Mars.

That might be peering thousands of trillions of miles into the vastness of space, looking for Earth-sized planets, and searching for an answer to the big question:

"Are we alone?"

Exploring heavens brings advances here on Earth that we can't even imagine.

But we should also pursue these missions because there's more to life than survival and consumption.

Are these goals bold? Yes. Are the missions risky? Yes. Is there a chance we could fail? You bet.

Think about the University of Arizona team, led by Dr. Peter Smith, that proposed, designed and built the camera that landed on Mars last summer.

That camera brought the world a step closer to the Red Planet.

But only after the engineers overcame problems that arose during each and every test run before launch. They had failures.

In other words, we didn't know if that camera would work. We didn't know if Mars Pathfinder would succeed.

New frontiers -- in space and on Earth -- are always risky . . . and often dangerous.

But we weren't afraid to dream.

We refuse to shirk away because people want guarantees. We do what we have to do to enrich the human experience and give meaning to our lives.

So should you.

When I first became Administrator of NASA, we were trying to see which robots we would send to Mars and which robot would eventually carry U of A's camera.

We gathered all the robots and put them on the Mall in Washington.

There were 40 robots gathered on a Martian landscape display.

I went over to one exhibit where four robots were marching around, and I asked the young man who seemed to be in charge:

"Which is the **best** robot -- the one you want to send to Mars?"

And he said, "That one over there," and there was a robot on its back, making awkward rocking movements.

Then I asked: "Which one will you send to Mars?"

And he said, "to tell you the truth, that one over there. It's coming along." He pointed to a different robot.

I was curious. "Why don't you want to send that robot?"

He said, "Oh, Mr. Goldin, it's too risky?"

I said, "So what?"

He said, "You don't understand. That is a very risky system, entailing the most complicated electronics, because it's so mechanically elegant."

I said, "So what?"

He said, "My colleagues want to send the other one."

I said, "So what?"

He said, "Oh, Mr. Goldin. You don't understand. I can't push it."

I said, "So what?"

"If I push it too hard, my boss is going to be angry at me"

I said, "So what?"

He said, "Oh, you don't understand, I could lose my job."

I said, "So what?"

Now my point is, I'm not asking you to sacrifice your livelihood, but you cannot be driven by fear to do the expected thing.

You have got to draw a moral line in the sand and say, "Beyond that point, I will not go."

And if necessary, you have to say, "I will accept failure, because we cannot afford to be afraid of it."

Because if you have no failure, you will not have success.

Don't always do what's expected. Don't build monsters out of fear of failure. Believe in yourself. Every person has the potential to do whatever they believe in their heart they can do.

Thousands of years ago, a caveman picked up a flaming stick, took a risk, and burned his fingers. Progress.

Columbus battled rats and scurvy. He took a risk. Progress.

The Gutenberg press. The Internet. The International Space Station.

Progress. Progress. Progress.

Now it's your turn.

Take your place in history.

You don't have to be a rocket scientist, or a Senator . . . you don't even have to be friends with Jack Nicholson.

You just have to be confident enough that when you face difficult opposition and people who know with certainty what can't be done and tell you so . . .

tell them no.

Take risks, and keep going. Show them what can be done.

And if you lay it on the line and suffer a loss or setback, it's OK. Pick yourself up, learn by that mistake, and keep going.

Have a picture burned deep into your brain of what your dream is, and never let go of it.

Mine is an astronaut on Mars -- in a nice, white spacesuit set against a red background . . . with a NASA logo on one shoulder and an American flag on the other . . . leading other astronauts in white spacesuits with other logos and other flags.

When you try to make your dream a reality, and when you reach back for that image in your brain . . . you might burn your finger.

But do it anyway.

That's what all this preparation for launch and journey into the real world is about.

One more piece of advice, a request actually.

Don't just focus on your career. Always take time out to love and to live.

You're going to be busy, but never forget family and friends.

In other words, as a parent, and on behalf of all the other parents here today . . . please . . . at least once in a while . . . don't forget to check in with the old Mission Control.

Indulge us.

So to the 1998 graduating class of the University of Arizona:

Dream big.

Take risk.

"Bear Down" . . .

And Go for launch.

Lift-off on this wonderful journey we call life.

Godspeed to all of you.

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